



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604**

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Menominee Landfill, Menominee, Michigan

FROM: Vicky Mei, Environmental Engineer
AECAB (IL/IN)

THRU: Nathan Frank, Section Supervisor
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: Menominee Landfill

Facility Location: W6214 Elmwood Road, Menominee, Michigan 49858

Date of Virtual Inspection: September 7, 2022

EPA Inspector(s):

1. Vicky Mei, Environmental Engineer

Other Attendees:

1. Madeline Schwerinski, Site Engineer, Waste Management
2. Kurt Kietzer, Site Manager, Waste Management
3. Gina McCann, State-wide Specialist for Land Quality, EGLE
4. Joseph Scanlan, District Inspector for Marquette District Office, EGLE

Contact Email Address: mschweri@wm.com

Purpose of Inspection: Clean Air Act inspection

Facility Type: Municipal Solid Waste Landfill

Regulations Central to Inspection: 40 C.F.R. 62.16718(a)(3)

Arrival Time: 1:00 PM CT

Departure Time: 1:25 PM CT

Inspection Type:

- ☐ Unannounced Inspection
- ☒ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☐ Provided Small Business Resource Information Sheet
- ☒ Small Business Resource Information Sheet not provided. Reason: Not a Small Business
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Waste Management staff unless otherwise noted. The inspection was conducted virtually.

Process Description:

Menominee Landfill is also known as Michigan Environs Inc. The landfill design capacity is 6.4 million cubic yards of waste. The landfill accepts about 70,00 tons of waste per year that has a composition of 40% municipal solid waste, 5% construction and demolition waste, and 55% inert waste, which includes special wastes, foundry sand sludge, and soils. The waste intake rate has decreased since 2014. The current amount of waste in place is about 5.8 million tons. The landfill was constructed starting from Phase 3, Cell 1 through Phase 3, Cell 12. Cell 12A is currently being constructed and the active area is now in Cells 10 and 11. There are three more cells remaining to be constructed and filled.

Passive wells are standing pipes, installed with bentonite seals. There are a total of 35 passive wells with one well per acre. The depth of the wells ranges from 25 to 90 feet below grade. The perforations on the wells begin 10 feet below grade. There are 20 mobile flares that are moved to control the gas as needed for odor control. Twenty-five acres in Cells 1 and 2 and portions of Cells 3 through 8 are capped with final cover. Construction is underway to cap fifteen more acres.

Staff Interview:

The landfill was acquired in 1995 and the estimated end of life is in 2064. 40 C.F.R. Part 62, Subpart OOO became applicable on its effective date of June 21, 2021. On the day of the inspection, each of the 20 mobile flares were hooked up to passive wells.

There is a leachate system that removes about 4 to 6 million gallons of leachate per year. There are no air emission limits in the permit. The earliest tier 1 applicability date was estimated to be in 1996. The earliest tier 2 test report available is estimated to be from 2000. All tier 2 test results showed a gas emission rate of less than 50 megagrams per year. The 2016 tier 2 test showed a gas emission rate of 1.38 megagrams per year for 2015. For the 2020 tier 2 test, samples were taken from 21 passive well vents and 1 sample probe. There were no caps on the passive well vents used during the test. The caps would have only been needed if there was difficulty pulling

a sample from a vent. There were no nitrogen and oxygen corrections made to the 2020 tier 2 calculations. Water levels in passive wells are not measured.

TOUR INFORMATION

EPA Tour of the Facility: No

Data Collected and Observations:

The Tier 2 Landfill Gas Sampling and Analysis Report, dated December 28, 2020, was reviewed. The results indicated a non-methane organic compound (NMOC) concentration of 276 parts-per-million by volume (ppm_v), which was 46 ppm_v as hexane. The NMOC emission rate using the LandGEM calculation model yielded an emission rate of 7.51 Mg/year for 2020.

Photos and/or Videos: were not taken during the inspection.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

1. Tier 2 Landfill Gas Sampling and Analysis Report, dated December 28, 2020

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents:

- Information on why the sampling probe was purged before collecting a sample
- Any determination information permitting the sampling at passive wells
- Operating permit

Concerns: No oxygen or nitrogen correction factors were used in the calculation of the NMOC concentration and emission rate in the Tier 2 Landfill Gas Sampling and Analysis Report, dated December 28, 2020.

DIGITAL SIGNATURES

Report Author: _____

Section Supervisor: _____